

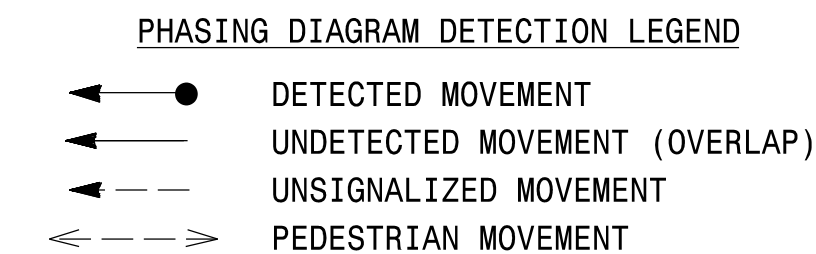
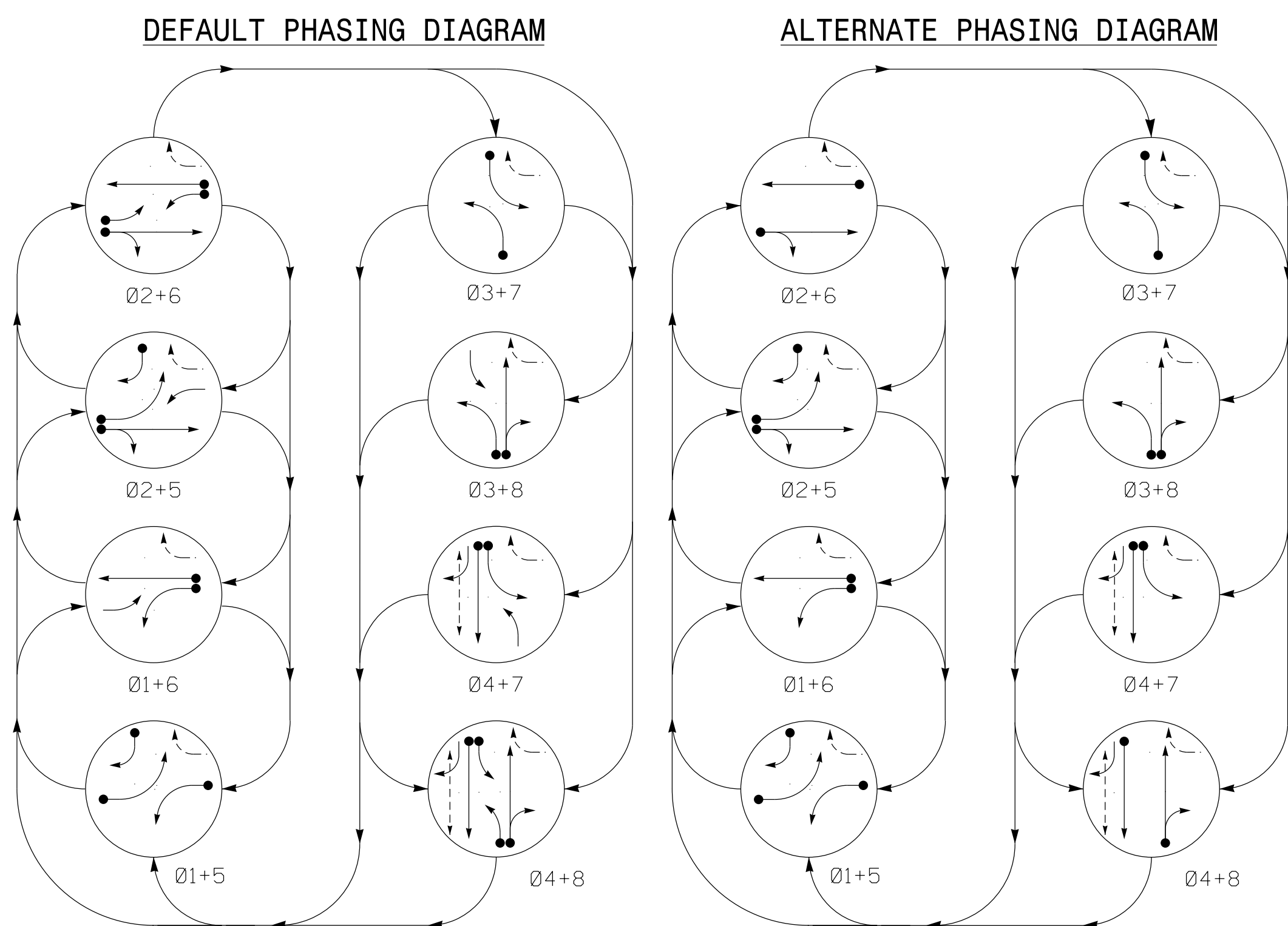
8 Phase Fully Actuated w/ EV Preemption & Alternate Phasing Operation (Isolated)

NOTES

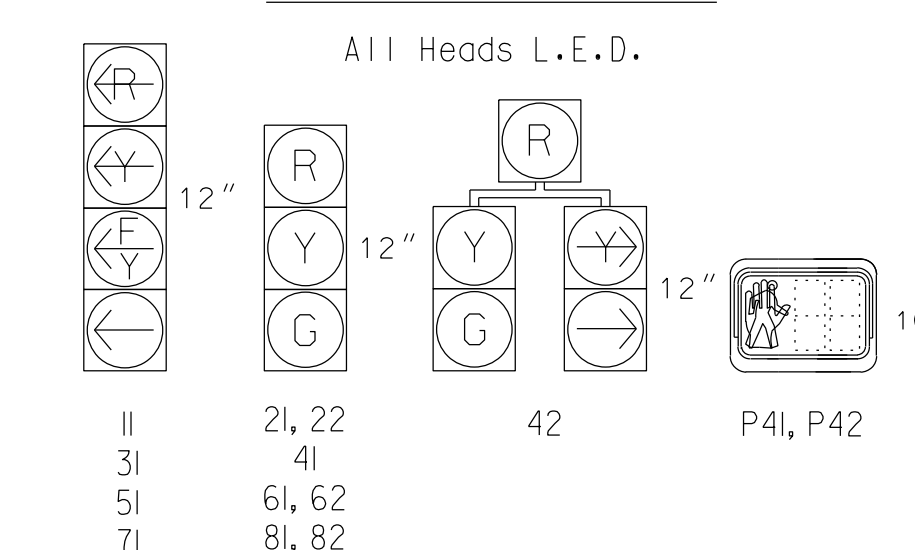
- Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018. The PSP can be accessed at the following website: <http://connect.ncdot.gov/resources/safety/Pages/ITS-Design-Resources.aspx>
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 1 and/or Phase 5 may be lagged.
- Phase 3 and/or Phase 7 may be lagged.
- Set all detector units to presence mode.
- Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
- Program pedestrian heads to countdown the flashing "DON'T WALK" time only.
- Pavement markings are existing unless otherwise displayed.
- Remove the bag coverage of pedestrian signal heads.
- This intersection features an optical preemption system. Shown locations of optical detector are conceptual only.
- The Division traffic engineer will determine the Delay before Preempt and preempt Dwell Min Green time for the emergency vehicle preemption timing.
- Optical Detector 10 calls EVP 3, Optical Detector 20 calls EVP 4, Optical Detector 30 calls EVP 5.
- The Division traffic engineer will determine the hours of use for each phasing plan.

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	DETECTOR PROGRAMMING				SYSTEM LOOP	NEW CARD
					PHASE	CALLING	EXTENSION	STRETCH TIME		
1A	6X40	0	2-4-2	-	1	Y	Y	-	15*	-
2A	6X6	70	4	Y	2	Y	Y	-	-	Y
3A	6X40	0	2-4-2	-	3	Y	Y	-	15*	-
4A	6X40	0	2-4-2	-	4	Y	Y	-	-	-
5A	6X40	0	2-4-2	Y	5	Y	Y	-	15*	Y
5B	6X40	0	2-4-2	-	5	Y	Y	-	15	-
6A	6X6	70	4	-	6	Y	Y	-	-	-
7A	6X40	0	2-4-2	-	7	Y	Y	-	15*	-
8A	6X40	0	2-4-2	-	8	Y	Y	-	10	-

\* Reduce Delay to 3 Seconds During Alternate Phasing  
 \*\* Disable Phase Calls for Loops During Alternate Phasing

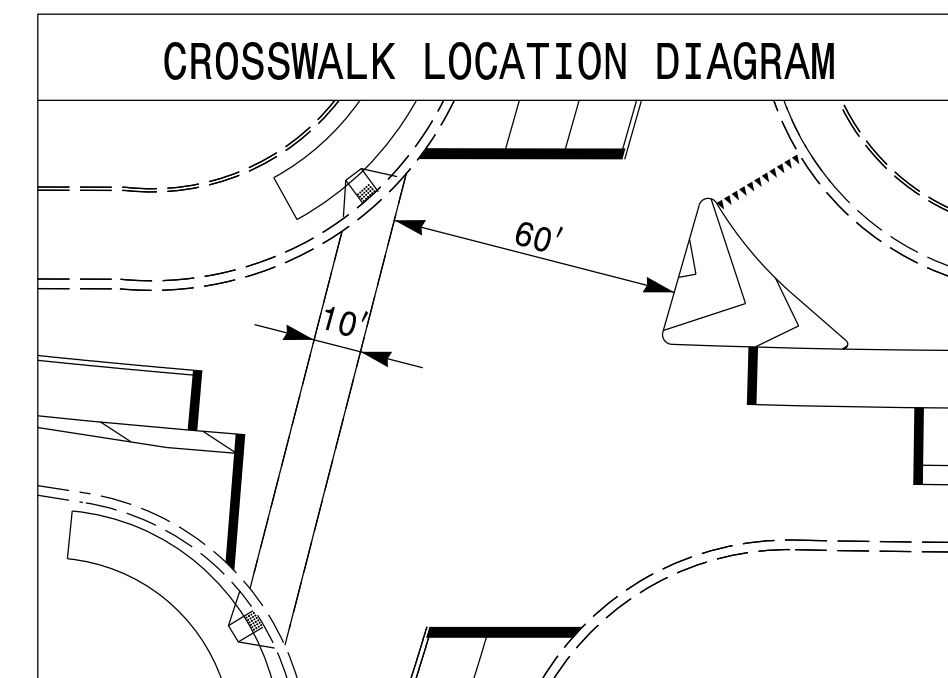
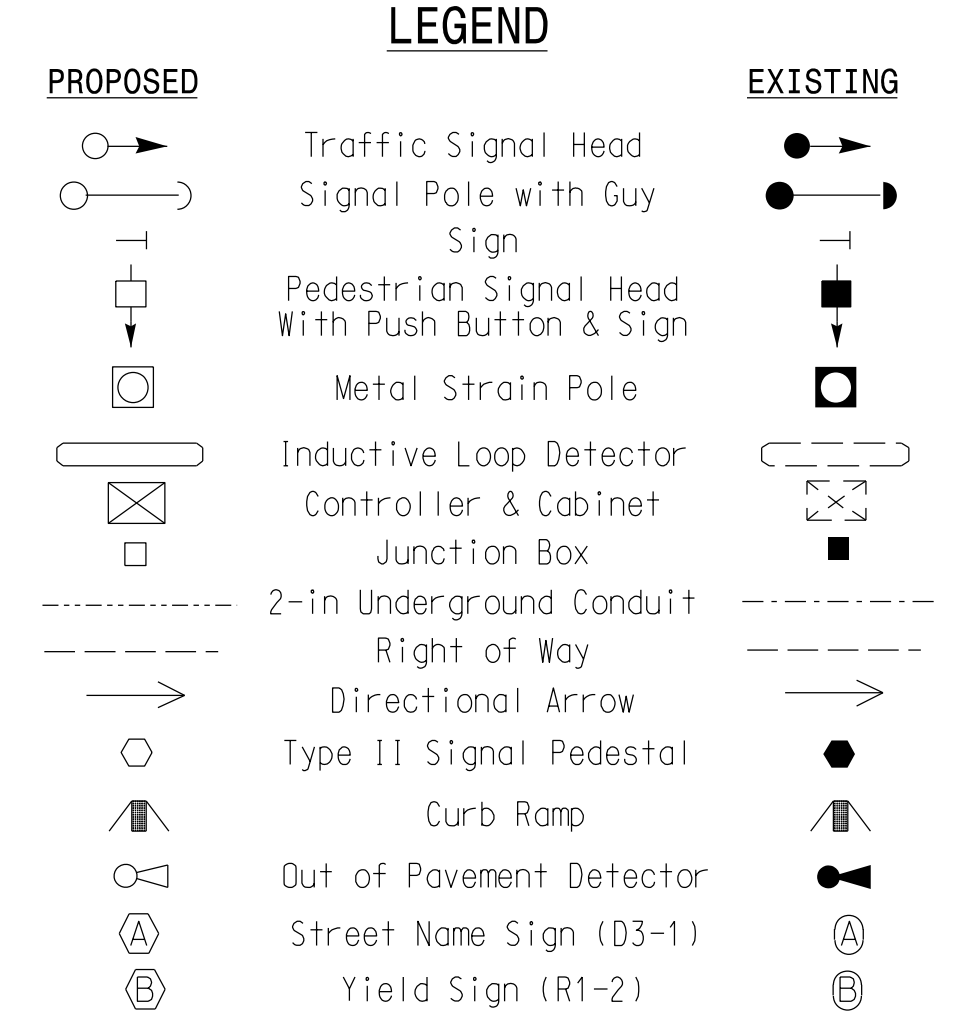
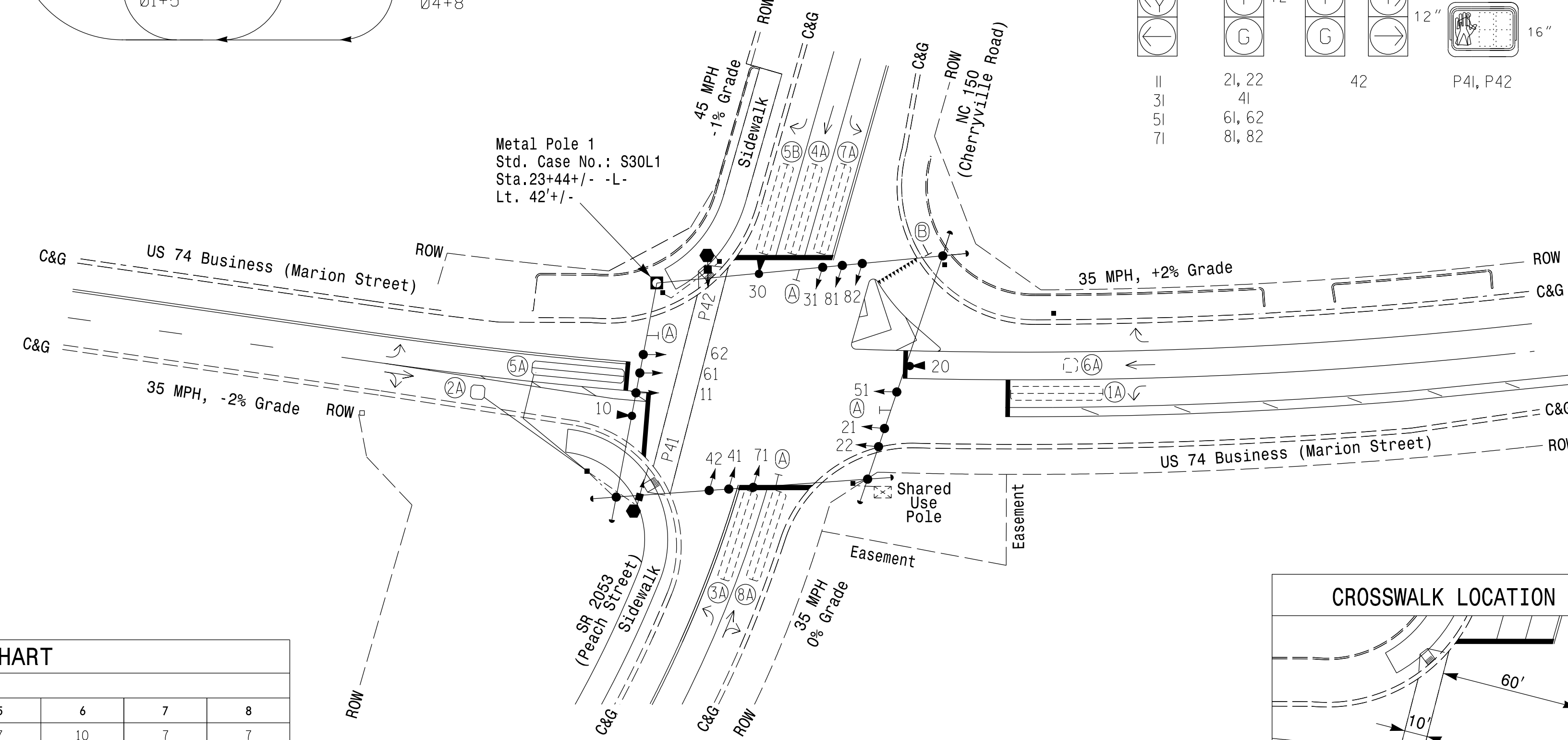


SIGNAL FACE I.D.



FUNCTION	PRE 3	PRE 4	PRE 5
Interval 1 - Dwell Green	255	255	255
Interval 1 - Dwell Yellow	0.0*	0.0*	0.0*
Interval 1 - Dwell Red	0.0*	0.0*	0.0*
Interval 5 - Exit Green	1	1	1
Interval 5 - Yellow	0.0	0.0	0.0
Interval 5 - Red	0.0	0.0	0.0
Exit Phase(s)	2+6	2+6	4+8
Priority	Medium	Medium	Medium
Delay Time	0	0	0
Min Green Before Pre	1	1	1
Ped Clear Before Pre	11	11	11
Yellow Clear Before Pre	0.0*	0.0*	0.0*
Red Clear Before Pre	0.0*	0.0*	0.0*
Dwell Min Time	10	10	7
Enable Backup Protection	N	N	N
Ped Clear Through Yellow	Y	Y	Y
Omit Overlaps	-	-	-
Preempt Extend**	2	2	2

\* Time defaults to time used for phase during normal operation  
 \*\* Program Timing on Optical Detection Unit



FEATURE	PHASE							
	1	2	3	4	5	6	7	8
Min Green 1*	7	10	7	7	7	10	7	7
Extension 1*	2.0	3.0	2.0	2.0	2.0	3.0	2.0	2.0
Max Green 1*	15	45	15	25	15	45	15	25
Yellow Clearance	3.0	4.0	3.0	4.6	3.0	4.0	3.0	4.6
Red Clearance	3.5	2.8	2.1	1.3	2.9	2.8	2.4	1.3
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk 1*	-	-	-	7	-	-	-	-
Don't Walk 1	-	-	-	22	-	-	-	-
Walk Advance Time	-	-	-	-	-	-	-	-
Seconds Per Actuation*	-	-	-	-	-	-	-	-
Max Variable Initial*	-	-	-	-	-	-	-	-
Time Before Reduction*	-	-	-	-	-	-	-	-
Time To Reduce*	-	-	-	-	-	-	-	-
Minimum Gap	-	-	-	-	-	-	-	-
Recall Mode	-	MIN RECALL	-	-	-	MIN RECALL	-	-
Vehicle Call Memory	-	YELLOW	-	-	-	YELLOW	-	-
Dual Entry	-	-	-	ON	-	-	-	ON
Simultaneous Gap	ON	ON	ON	ON	ON	ON	ON	ON

\* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

SIGNAL FACE	PHASE							
	0	1	2	3	4	5	6	7
11	←	←	←	←	←	←	←	←
21, 22	R	R	G	G	R	R	R	R
31	←	←	←	←	←	←	←	←
41	R	R	R	R	R	G	G	R
42	R	R	R	R	R	G	G	R
51	←	←	←	←	←	←	←	←
61, 62	R	G	R	G	R	R	R	R
71	←	←	←	←	←	←	←	←
81, 82	R	R	R	R	R	G	G	R
P41, P42	DW	DW	DW	DW	DW	W	W	DRK

SIGNAL FACE	PHASE							
	0	1	2	3	4	5	6	7
11	←	←	←	←	←	←	←	←
21, 22	R	R	G	G	R	R	R	R
31	←	←	←	←	←	←	←	←
41	R	R	R	R	R	G	G	R
42	R	R	R	R	R	G	G	R
51	←	←	←	←	←	←	←	←
61, 62	R	G	R	G	R	R	R	R
71	←	←	←	←	←	←	←	←
81, 82	R	R	R	R	R	G	G	R
P41, P42	DW	DW	DW	DW	DW	W	W	DRK

This plan supersedes the plan signed and sealed on 11/13/2018.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Signal Upgrade-Final Design

US 74 Bus. (Marion Street) at NC 150 (Cherryville Road) / SR 2053 (Peach Street)

Division 12 Cleveland County Shelby

PLAN DATE: March 2022 REVIEWED BY: J.L. Lewis

PREPARED BY: J. Ma REVIEWED BY: M.L. Stygles

REVISIONS: INIT. DATE

3/1/2022

3/1/2022

1"=40'